REMARKS

Applicants respectfully request reconsideration of the claims in view of the following remarks. Claims 1-5 have been amended and claim 6 has been incorporated into claim 1. After entry of the amendment, claims 1-5 will be pending.

Rejection under 35 U.S.C. § 112

(1) Claims 1-6 were rejected under 35 U.S.C. § 112, first paragraph as lacking written description. The Office Action alleges the limitation "immediately subjecting the cut meat to an initial quick freeze process" in claim 1 is not supported by the specification. Applicants do not agree.

The specification at page 6, lines 17-18 discloses that once the fish has been cut into pieces, fillets, or medallions, it must be frozen quickly using an individual quick freezing process. Accordingly, claim 1 has been amended to clarify that "once the meat is cut it is quickly subjected to an initial quick freezing process...". Use of the term "once" in the specification followed by "quickly" clearly implies that the term "quickly" is describing the interval of time between the cutting step and the freezing step as the freezing is already being described as a quick freezing process. Applicants therefore submit the amendment to claim 1 is supported by the specification and does not introduce new matter.

(2) Claims 1-6 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Claims 1 and 3 have been amended to further clarify the invention as claimed. Applicants submit claim 1 and 3 as amended fully comply with the requirements of § 112, second paragraph. Withdrawal of the rejection is respectfully requested.

Rejection under 35 U.S.C. § 103

Claims 1-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Berkowitz (U.S. 2,825,652) in view of Mayr (2003, Appl. Environ. Microbiol., 69(8):4697-4705), as evidenced by Day (2000, Chilled foods: A comprehensive guide, 2nd Ed., page 145) and

International Trade (1999, Export Packaging, 44:1-28). Applicants respectfully traverse this rejection.

To make a *prima facie* case of obviousness, the teachings of the prior art should have suggested the claimed subject matter to the person of ordinary skill in the art, and all the claim limitations must be taught or suggested in the references cited by the Examiner. *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). As articulated by the Supreme Court, a combination is obvious if it is no more than the predictable use of known elements according to their established functions and there was a reason to combine the known elements. *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007). To make a *prima facie* case of obviousness, "it remains necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed." *Id.* A "reasonable expectation of success" is the standard with which obviousness is determined. MPEP § 2141; *Hodosh v. Block Drug Co.*, 786 F.2d 182, 187 n.5 (Fed. Cir. 1986).

The initial burden to make a *prima facie* case of obviousness is on the Examiner. *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993). Applicants submit the Office Action has not established a *prima facie* case of obviousness as the cited references, alone or in combination, do not teach or suggest all the claim limitations and lack sufficient reason to combine.

The Office Action at page 10 alleges it would have been obvious to one of skill in the art to process the shrimp and fishery products disclosed in International Trade by the method disclosed in Berkowitz. Applicants do not agree.

Claim 1 as amended is directed to a process for preserving meat from fish that preserves the properties of a fresh fish product. The meat from the fish is cut and then quickly subjected to a quick freezing process wherein the temperature reaches around -5 °C in the center of the meat piece in a maximum of 1.5 hours, packaged in special packages having impermeability to gases and water vapor in a vacuum process, and then continuing the freezing from around -5°C to reach a temperature of around -18°C in the center of the meat piece in a maximum of 2 hours including the packaging time.

The primary Berkowitz reference discloses that color development for **beef products** is important and discloses a method of freezing beef products such that the **frozen beef products**

have a bright red color which is associated with fresh meat. See Berkowitz at col. 1, lines 20-33 and col. 4, lines 19-20 and 75. Berkowitz discloses an initial oxidizing and freezing stage wherein the meat is rapidly frozen to a temperature of about -20 to -40 °F (corresponding to -29 to -40 °C) to form a hard crust on the meat and set the color by oxidation but leaving the interior of the meat body only slightly frozen. Notably, Berkowitz does not define "slightly frozen" by temperature anywhere in the patent.

Alternatively, the beef can be frozen to a fully solid condition at a temperature of -20 to -40 °F (corresponding to -29 to -40 °C) and thereafter tempered under conditions to raise the temperature to the crystallization point of the meat (about 28 °F which corresponds to about -2 °C) at which point the oxidation of the meat may be achieved. Regardless of the initial freezing technique, following surface oxidation the meat is packaged in an envelope of shrinkable film material, the envelope is sealed to hold the vacuum, heated treated shrink the sealed envelope around the meat and to slightly thaw the meat to melt the surface crystals to bring out the original color (i.e. red) of the meat, and then subjected to a rapid deep freeze to a temperature of about -20 to -40 °F.

For meats other than beef, Berkowitz specifically discloses freezing the meat to a temperature of about -20 to -40 °F (corresponding to -29 to -40 °C) and then sawing or cutting the frozen meat into pieces without a tempering treatment because color development is not important. See Berkowtiz at col. 4, lines 14-20. Within the context of meats other than beef Berkowitz therefore discloses freezing the meat and then cutting the frozen meat.

In contrast to Berkowitz, the claims recite cutting the fish meat and once the meat is cut quickly subjecting the cut meat to a quick freeze process to freeze the meat to a particular temperature. In both the initial and final freezing steps recited in the claims, the temperature that the meat is frozen to is significantly different (-5 °C versus -29 to -40 °C and -18° C versus -29 to -40° C) than the temperature disclosed in Berkowitz. Berkowitz therefore does not disclose all the limitations of the claims as amended and in fact teaches away from the order of steps and freezing temperatures recited in the claims.

Regarding the International Trade reference, all of the meats disclosed in Berkowitz are from a mammal, even the meats (e.g., pork, lamb, and veal) other than beef. The meat of fish is

different from the meat of a mammal in terms of structure, moisture content, texture, density, etc. Nowhere in any of the cited references is it disclosed or suggested that the freezing methods, temperature conditions, and timeframes for processing meat from a mammal is suitable for processing meat from a fish such that the fish product when thawed has the properties of fresh fish. Absent Applicants' disclosure, one of skill in the art would not have had a reasonable motivation or expectation to combine the teachings of International Trade with Berkowitz to arrive at the claims.

At paragraphs 16-20 of the Office Action, the Examiner acknowledges that Berkowitz does not disclose or suggest that the temperature within the center of the meat is around -5 °C after the initial freezing step or around -18 °C after the final freezing step or the timeframes recited in the claims. The Examiner, however, alleges it would have been obvious to one of skill in the art to optimize the temperature within the center of meat disclosed in Berkowitz to around -5 °C after the initial freezing step and to around -18 °C after the final freezing step. Similarly, the Examiner alleges it would have been obvious to optimize the timeframe associated with the freezing steps disclosed in Berkowitz to arrive at the claims. Applicants do not agree.

First, Applicants note that the reasoning in the Office Action is based upon the methods in Berkowitz that are directed to beef products. As described above, the claims are directed to fish products and Berkowitz specifically discloses a different process for meat other than beef that teaches away from the order of steps and freezing temperatures recited in the claims.

Second, all of the meats disclosed in Berkowitz are from a mammal, even the meats (e.g., pork, lamb, and veal) other than beef. The meat of fish is different from the meat of a mammal in terms of structure, moisture content, texture, density, etc. Nowhere in any of the cited references is it disclosed or suggested that the freezing methods, temperature conditions, and timeframes for processing meat from a mammal is suitable for processing meat from fish such that the fish product when thawed has the properties of fresh fish.

Therefore, it would not have been obvious to one of skill in the art to optimize the temperature within the center of meat disclosed in Berkowitz to around -5 °C after the initial freezing step and to around -18 °C of the final freezing step, or within the timeframes associated with these steps as alleged by the Examiner. Absent Applicants' disclosure, one of skill in the

art would not have had a reasonable motivation or expectation that the process disclosed in Berkowitz could be successfully modified and/or optimized to arrive at the claimed process.

The secondary references of Mayr and Day do not cure the deficiencies of Berkowitz alone or in combination with International Trade. Similar to Berkowitz, Mayr is directed to beef and pork and does not disclose or suggest that any of the freezing and/or packaging conditions are suitable for fish. Mayr is directed to a laboratory technique to analyze damage to the original features of a meat product, such as beef and pork. The meat in Mayr is unfrozen before vacuum packaging. Therefore, the vacuum sealing causes the outflow of the natural and original meat fluids because the meat is not frozen until after the vacuum packaging process. The process disclosed in Mayr accordingly does not achieve the objective of the present invention which is a preserved meat product having the organoleptic properties of a fresh meat product. Moreover, the meat samples in Mayr were only tested after 11 days of storage, whereas the claimed process provides a meat product having organoleptic properties of a fresh meat product after tens of months of storage.

In view of the foregoing, Applicants submit the Office Action has failed to establish a *prima facie* case of obviousness. The cited combination of references does not disclose or suggest all the elements of the claims and teaches away from the claims. Withdrawal of the rejection is respectfully requested.

Conclusion

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

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